may exist in either adult or pediatric HIV Research Network (HIVRN) clinics and evaluated the relationship of these services with engagement in HIV care.
**Methods:** Seven adult and 5 pediatric clinics in the HIVRN, a national consortium of primary and subspecialty HIV clinics, contributed data to this analysis. Eligible participants were 15 to 24-year-old youth receiving care at HIVRN clinics at any time between 2008 and 2011. Individuals who died or who transferred their care to sites outside of the HIVRN were excluded (n = 62), as were transgendered youth due to small numbers (n = 5). Demographic and clinical data collected included gender; self-reported race/ethnicity; HIV acquisition risk; CD4 count; and antiretroviral treatment (ART) status. Sites were surveyed to assess the availability of youth programs, services, and clinic environments conforming to the WHO youth-friendly framework. The primary outcome was engagement in care, defined as having at least one primary HIV visit and one CD4 count in the year 2011. Multivariable logistic regression using theory driven models assessed the clinic-level characteristics and youth services associated with engagement in HIV care.
**Results:** Between 2008 and 2011, 941 HIV-infected 15 to 24-year-old youth received care at HIVRN clinics (68% male; 69% Black; 69% with non-perinatal HIV infection; median CD4 483 cells/mm3 [range 4-7231]; 67% on ART). Of these, 770 (82%) were engaged in care in 2011. Clinic characteristics associated with engagement in care in univariate analyses included availability of pediatric or adolescent-trained providers (odds ratio (OR) 2.64; 95% confidence interval (CI) 1.87-3.71); youth-friendly waiting areas (e.g. youth-oriented pamphlets, media access) (OR 3.09; 95% CI 2.11-4.53); family planning/Title X services (OR 2.48; 95% CI 1.70-3.62), peer support groups (OR 2.50; 95% CI 1.73-3.60); youth-tailored services (e.g. youth social worker) (OR 2.64; 95% CI 1.85-3.77); and text/email (OR 3.24; 95% CI 2.20-4.77) for patient communication. In multivariable analyses, engagement in care remained associated with having pediatric or adolescent medicine-trained providers in the clinic (adjusted OR (AOR) 1.89; 95% CI 1.19-2.98) and youth-friendly waiting areas (AOR 2.59; 1.59-4.23); conversely, decreased engagement was associated with onsite peer support groups which were not age-specific (AOR 0.16; 95% CI 0.05-0.55) after adjusting for demographic and clinical variables.
**Conclusions:** For HIV-infected youth, youth-friendly waiting areas and the availability of providers with pediatric or adolescent training may increase engagement in care. Peer support groups that are not age-specific may negatively impact engagement. Further investigations evaluating the effectiveness of youth-friendly approaches on engagement in care for HIV-infected youth are needed to improve care delivery and clinical outcomes for youth.
**Sources of Support:** NICHD T32HD052459, NIAID 1K23AI084549, AHRQ 290-01-0012.

## CONTRACEPTION

**116.**

### USE OF WITHDRAWAL AMONG YOUNG ADULTS IN THE U.S.: PULLING OUT ALL THE STOPS?

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**Purpose:** To examine prevalence and correlates of use of withdrawal (coitus interruptus), alone and in combination with other contraceptive methods, among a nationally-representative sample of young adults in the U.S.
**Methods:** Data come from the baseline survey of the Continuity and Change in Contraceptive Use study, administered online to a national sample of 4,643 women aged 18-39 in late 2013. Analysis is limited to 889 women aged 18-24 who were sexually active in the last three months, at risk of pregnancy and not trying to get pregnant. Contraceptive use in the last 30 days is measured in two questions assessing hormonal methods separately from coital methods; in the latter we purposely placed withdrawal as the first option to elicit more complete reporting. We compare two measures of withdrawal use: withdrawal as the most effective method used in the 30 days and a dichotomous measure that identifies any use of withdrawal in the last 30 days. We also examine four different withdrawal "method mix" categories—any use of withdrawal, use with condoms, use with hormonal methods and use of only withdrawal.
**Results:** Among young women at risk of pregnancy, the shares reporting withdrawal as the most effective contraceptive method used in the last 30 days (11%) or reporting any use of withdrawal during that period (44%) was substantially higher than recent estimates from the National Survey of Family Growth of about 5% and 31% respectively. We found that 29% of young women reported withdrawal used in combination with condoms (19%), hormonal method (25%) or both; only 15% relied on withdrawal exclusively. Any use of withdrawal, alone or in combination with other methods, was more common among women who reported themselves in newer relationships, not happy in their relationship, having more serious arguments, not committed, and not in a monogamous relationship. Withdrawal use was not associated with either objective or subjective birth control knowledge, union status or race/ethnicity. In contrast, withdrawal alone was significantly more likely among those married (24%) as compared to cohabiting (17%) or not in a union (10%), as well as Hispanics (30%) as compared to NH white (11%) or NH Black (12%) women. Finally, given common views that withdrawal is only slightly better than using nothing, we compared the correlates of withdrawal and non-use of any contraceptive method. Non-use was particularly high among women reporting that they (11%) or their partner (11%) felt it was not at all important to avoid pregnancy, as well as this scoring poorly on the measure of objective birth control knowledge; none of these factors was associated with overall withdrawal use.
**Conclusions:** Asking directly about withdrawal use resulted in higher reporting of this method than in prior studies. For many young women, withdrawal appears to be an important part of their contraceptive strategies. Withdrawal deserves more attention among reproductive researchers and service providers. More work is needed to understand male motivation for withdrawal use, especially given evidence of its use in combination with other methods, in less stable and healthy relationships.
**Sources of Support:** JPB Picower Foundation.

**117.**

### THE EFFECTS OF DATING VIOLENCE ON CONDOM AND CONTRACEPTION USAGE AT LAST SEX IN ADOLESCENT MALES

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**Purpose:** According to the 2011 Youth Risk Behavior Survey (YRBS), 9.4% of US teens grades 9-12 reported being hit, slapped, or

physically harmed on purpose by their boyfriend or girlfriend. Teen dating violence (TDV) is associated with depression, suicide attempts, substance use and abuse, and sexual risk behaviors in teens. The majority of previous work has focused on female teens. There is little understanding of the influence of physical TDV on male condom usage and no reports on the influence on contraception usage at last sex. We examined the association of physical TDV and condom and contraceptive use at last sex in adolescent males.

**Methods:** We performed a secondary analysis of the 2011 Youth Risk Behavior Survey. The sample included approximately 7,000 male participants. The dependent variables in our study were condom and highly effective contraception (defined as Combined Hormonal Contraception, IUD, Implant, or Injection) usage at last sexual intercourse. Our independent variable of interest was physical TDV. Additional independent variables included: age, gender, race/ethnicity, electronic bullying, forced sex, age at first sexual intercourse, number of recent sexual partners, and alcohol and drug use before last sexual intercourse. Univariate analyses of the risk factors were performed to obtain crude odds ratios. Multivariate stepwise logistic regression analysis was conducted to determine the best set of predictors as well as derive adjusted odds ratios. We utilized a p-value of $< 0.05$ for significance and a 95% confidence interval.

**Results:** Approximately 1 in 10 U.S. male (9.5%) and female (9.3%) teens reported having experienced teen dating violence. Half (49.2%) of males reported ever having had sexual intercourse; 9% of males reported coitarche at age 13 years old or younger. 70% of males reported condom use and 17.1% report that a highly effective contraceptive use at last sex. Males who reported physical TDV had a significant reduction in condom usage at last sex (AOR = 0.641, 95% CI 0.487-0.844). Males who reported having experienced forced sex (AOR = 0.469, 95% CI 0.313-0.705) or electronic bullying (AOR = 0.653, 95% CI 0.515-0.829) also reported a significant reduction in condom usage at last sex. In adjusted analyses, the association of physical TDV and use of highly effective contraceptive methods at last sex in males did not meet statistical significance (AOR = 0.635, 95% CI 0.390-1.035).

**Conclusions:** Teenage males in the US report physical TDV at the same rates as their female counterparts. Physical TDV is associated with a reduction in condom usage at last sex for males but was not significantly associated with use of highly effective contraception at last sex. This reinforces the need for education on healthy relationships for all adolescents. Screening of male adolescents for physical TDV may provide valuable insights into sexual health risks. Future studies should explore other aspects of adolescent relationship abuse in males, including emotional and sexual abuse, and the interaction with protective reproductive health behaviors.

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**118.**

## CORRELATES OF CONDOM KNOWLEDGE, SKILLS, AND INTENT TO USE CONDOMS IN INCARCERATED ADOLESCENTS

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**Purpose:** Incarcerated adolescents are at increased risk for exposure to sexually transmitted diseases and HIV due to their participation in high risk behaviors including sexual activity. Use of condoms decreases the risk of transmission of sexually transmitted diseases in this high risk, underserved population. Few studies have investigated correlates of condom knowledge, skills and intent to use condoms in incarcerated adolescents. The aim of this study to assess condom knowledge, attitudes and behaviors in a diverse population of incarcerated adolescents.

**Methods:** Sociodemographic, psychosocial, and sexual behavior data were collected and analyzed on 1198 incarcerated adolescents ages 13-18 participating in an HIV/STI education intervention in a detention facility in Alabama. Univariate analyses, t-tests and anova tests were conducted. Items were taken from a newly created scale to designed to assess condom attitudes, condom skills knowledge, and intent to use condoms in incarcerated adolescent populations.

**Results:** Adolescent girls reported a higher intent to use condoms than adolescent boys $p = 0.033$. Beliefs about the use of condoms varied significantly by age and race ($p = 0.003$ and 0.017 respectively). Anova tests showed that condom skills knowledge and positive beliefs about condom use increased significantly with age ($p < .05$, $p = 0.003$ respectively).

**Conclusions:** Differences in the intent to use condoms vary by gender and age. Incarcerated adolescent girls are more likely than boys to endorse the intent to use condoms. The intent to use condoms, condom skills knowledge and positive beliefs about condoms does increase with age. Future programs for incarcerated adolescents should explore developing innovative programs that target adolescent boys and younger adolescents to improve skills, knowledge and beliefs around condom use.

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# STIs

**119.**

## DESIRE TO FATHER A CHILD AND CONDOM USE: A STUDY OF YOUNG BLACK MALES AT RISK OF SEXUALLY TRANSMITTED INFECTIONS

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**Purpose:** In the U.S., young Black males (YBM) continue to be disproportionally likely to acquire sexually transmitted infections (STIs) and Human Immunodeficiency Virus (HIV). Condom use is the primary public health strategy to prevent these infections. However, condom use is antithetical to conception of a child; thus desire to father a child or perception of partners' desire may be a primary barrier to STI/HIV protection. While an unavoidable reality when partners mutually desire conception, a very different situation exists when desire is not mutual. We examined whether male-reported discrepant desire to conceive was associated with